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|-----------------|-------------|----------------------|---------------------|------------------|
| 09/981,431      | 10/16/2001  | Michael T. Andreas   | MTI-31555           | 5688             |

31870 7590 05/10/2006

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| EXAMINER |
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KORNAKOV, MICHAEL

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| ART UNIT | PAPER NUMBER |
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1746

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/981,431

Applicant(s)

ANDREAS, MICHAEL T.

Examiner

Michael Kornakov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25,27-71,73-75,77-79 and 139-148 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,15-20,22-24,27,28,30-37,42-46,49-66,70,71,73,77,139-144 and 146-148 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-25,27-71,73-75,77-79,139-148 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims withdrawn from consideration are 8,11-14,21,25,38-41,47,48,67-69,74,75,78,79 and 145.

### DETAILED ACTION

1. Claims 1, 15, 18, 27, 28, 31, 42, 49, 51, 52, 54, 55, 60, 61, 62, 139-143, 146-148 are amended to introduce the limitations of pH of a claimed composition. Claims 26, 72, 76, 80-138 are canceled.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-25, 27-71, 73-75, 77-79, 139-148 are currently pending. Claims 8, 11-14, 21, 25, 38-41, 47, 48, 67-69, 74, 75, 78, 79, 145 are currently withdrawn from consideration as being directed to non-elected invention(s). Claims readable on the elected species and examined on the merits are the following: 1-7, 9, 10, 15-20, 22-24, 27, 28, 30-37, 42-46, 49-66, 70, 71, 73, 77, 139-144, 146-148.

4. Claim 77 and 144 are objected to because they do not in any way limit the claimed composition, but simply add the limitations to its intended use.

5. Claim 145 recites "abrasive particles" and therefore is withdrawn from consideration as being directed to a non-elected invention, as per Applicant's reply, dated 07/01/2003. Therefore, the identifier of claim 145 apparently should read --- withdrawn---.

6. Claims 1-7, 9, 10, 15, 18-20, 22-24, 27, 28, 30-37, 42-46, 49, 50, 55-60, 62-66, 70, 71, 77, 139-148 are rejected under 35 U.S.C. 103(a) as being unpatented Pregoen (U.S. 5,141,803), as per reasons of record.

Pregoen discloses an aqueous composition containing (a) 0.02-0.25 wt.% of

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potassium sorbate; (b) 0.05-0.20 wt.% of citric acid; (c) 0.02-0.20 wt.% of disodium salt of EDTA (chelating agent) ; (d) 0.03-0.24 wt.% of cationic biocide; and (e) water to 100 wt.%. Composition has pH 3.5-4.5. Major amount of water employed in the composition is deionized water. Relative amounts of ingredients of composition are within the claimed range (abstract, col.2, line 65 through 3, line 9). ***Composition in Table in col. 6 recites potassium sorbate, which reads on "antimicrobial agent" of the instant claims), citric acid (cleaning agent of the instant claims) and deionized water (solvent) in the amounts as instantly claimed.*** EDTA chelating agent is disclosed in the abstract. The difference between Pregozen and the instant claims that Pregozen uses 0.03% wt of biocide, while Applicants by changing the transitional phrase to "consisting essentially of" exclude the components that materially change the composition. However, by the virtue of definition "biocide" is **chemical that kills microorganisms**: a chemical designed to kill organisms, especially microorganisms, i.e. antimicrobial agent. Therefore, the addition of biocide in Pregozen will only enhance the antimicrobial action of potassium sorbate as an antimicrobial agent, and therefore, such combination would have been obvious to those skilled in the art, since it is prima facie obvious to combine two compounds each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, see *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). See also *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960). With regard to the functionally claimed limitations that the amounts of ingredients are added in order to formulate an effective cleaning composition for removal residual particles, it is noted that since the components of Pregozen's composition are the same and are added in the

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same relative amounts as claimed, and having the same pH as claimed the composition of Pregozen is fully capable of removing the particles as claimed.

7. Claims 16, 17, 51-54, 61, 73, and are rejected under 35 U.S.C. 103(a) as being unpatentable Pregozen in view of Small (U.S. 6,156,661).

With regard to claims 16, 17, 61 and 73 Pregozen disclose the composition as instantly claimed, utilizing sorbic acid and its salts as antimicrobial agents and citric acid and its salts as cleaning agents. The reference to Pregozen does not specifically recite the buffering agents, such as ammonium hydroxide.

Small discloses composition for removal of chemical residues from metal or dielectric surfaces or for removal of residues after chemical mechanical polishing of a copper surface, which is an aqueous solution with a pH between about 3.5 and about 7. The composition contains a nonfunctional, **difunctional** or trifunctional organic acid and a buffering amount of a quaternary amine, ammonium hydroxide (abstract). One of the preferred compositions contains citric acid, ammonium hydroxide and deionized water (Table VII in col. 11)

Since Pregozen is concerned with maintaining the pH of a composition in a specific range, and Small uses the ammonium hydroxide in a post CMP cleaning solution a person skilled in the art would have found it obvious to utilize the buffering agent of Small in compositions in order to buffer the solution and thus to arrive at the instant claims 16,17 and 61 and 73.

It is also noted that, since the cleaning gent of Small is identical to Pregozen, and since Small also utilizes formic acid in his cleaning composition (claims 1 and 11), which is an antimicrobial agent, a person skilled in the art would have found it obvious to utilize both citric acid (cleaning agent) and formic acid or sorbic acid (antimicrobial agent), as taught by Pregozen in combination of ammonium hydroxide of Small to maintain the desired pH and thus to arrive at the instant claims.

With regard to claims 51-54 Pregozen does not expressly disclose the use of another antimicrobial agent, such as benzoate. However, Pregozen does use two antimicrobial gents, one is sorbate and the other one is a biocide. Small utilizes benzoic acid in the amounts as claimed in lieu or in combination with citric acid in his composition for cleaning semiconductor wafers (see Table II and claim 1). It is within the skill of those skilled in the art to expect a combination of two known to work in an additive or cumulative manner. The combination of two compositions, each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition that is to be used for the same purpose is *prima facie* obvious *In re Kerkhoven*, 626 F 2d. 846, 850, 205 USPQ 1-69, 1072 (CCPA 1980).

### ***Response to Arguments***

8. Applicant's arguments filed 02/17/2006 have been fully considered but they are not persuasive.

Applicant's arguments with regard to rejection over Pregozen been fully considered but they are not persuasive. Applicants argues that Pregozen does not

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teach or suggest Applicant's compositions as claimed, which is formulated with a cleaning agent, an antimicrobial agent and a solvent, - or with a cleaning agent an antimicrobial agent, at least one of a surfactant, corrosion inhibitor, chelating agent, oxidizing agent and antioxidant, and a solvent, but not a cationic biocide as in Pregozen composition.

This is not found persuasive, since Pregozen does teach the same antimicrobial agent, the same cleaning agent, and the same chelating agent as the instantly claimed, and the addition of a 0.03 % wt of a biocide will NOT change materially the composition, since ***the biocide has the same function as the antimicrobial agent (by the virtue of its definition and nature)***, and therefore, it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught by the prior art, see In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980), wherein claims to a process of preparing a spray-dried detergent by mixing two conventional spray-dried detergents were held to be prima facie obvious. See also In re Crockett, 279 F.2d 274, 126 USPQ 186 (CCPA 1960).

Applicant's statement that the Examiner appears to question the patentability and validity of the issued claims of Pregozen is without merits, and will not be addressed, since the Applicant has not supported such statement, and nothing on this record shows that the Examiner questions the validity of Pregozen's patent. To the contrary Examiner reiterates that the instantly claimed composition and Pregozen's composition are



essentially the same, and since the composition, not the method is instantly claimed, the composition of Pregozen by the virtue of being substantially identical to the claimed composition is fully capable of performing the claimed functions.

And the last Applicants' argument is that the Examiner ignores that the cationic biocide is used in Pregozen's composition. In response to this it is noted that the nature of Pregozen's biocide does not change it's function as being antimicrobial (antibacterial) agent, and that was and is the rationale used by the Examiner in his rejection.

With regard to Applicant's argument on the combination of references of Pregozen and Small, the crux of such argument that the combination does not disclose every feature of the claimed composition. However, Applicants has failed to show WHAT are the specific features that are not allegedly disclosed by a combination of references. The reference to Small was only attracted to show that the use of ammonium hydroxide is proper for further adjustment of the pH.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

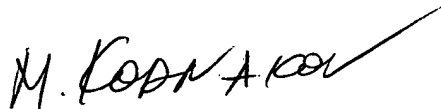
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "M. Kornakov", with a long, sweeping horizontal stroke extending to the right.

Michael Kornakov  
Primary Examiner  
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05/08/2006